

1. A torque-transmitting coupling assembly comprising:
- a tubular member made of super-elastic alloy, defining a passageway extending along a first axis;
  - a fitting member defining a shape presenting a first mating interface surface; and
  - a tool-bit member having a second axis and presenting a second mating interface surface adapted for receptive complementary facing with the first mating interface surface,
- whereupon relative motion between the fitting and tool-bit slides the first and second mating interface surfaces sideways into juxtaposition, with the first and second axes aligned with one another.
2. The assembly of Claim 1 further comprising a tongue member made of super-elastic alloy, whereupon the relative motion activates the super-elastic alloy of the tongue, allowing the mating interface surfaces to be held in juxtaposition with one another.
3. The assembly of Claim 2 further comprising a recess formed in the tool-bit, wherein the tongue detentively snaps into the recess to align the first and second axes with one another.
4. The assembly of Claim 2 wherein the fitting has an aperture opening onto the first mating interface surface and the tongue projects through the aperture.
5. The assembly of Claim 2 wherein the tongue is an integral part of the tubular member.
6. The assembly of Claim 2 wherein the tongue extends axially from an end of the fitting member and into the tool-bit.
7. The assembly of Claim 1, the fitting member further comprising a male part extending axially therefrom that defines a jig-saw shape presenting the first mating interface surface and wherein the tool-bit defines a female jigsaw shape presenting the second mating interface surface including a recess formed therein.
8. The assembly of Claim 1 wherein the first and second mating interface surfaces are correspondingly curved.

9. The assembly of Claim 2 wherein the tongue protrudes into a recess formed within the second mating interface surface to provide detenting attachment of the tool bit to the tubular member.
10. The assembly of Claim 1 further comprising a radially flexing collet that connects the fitting to the tubular member.
11. A surgical instrument having a torque-transmitting coupling assembly and comprising:  
a tubular member made of super-elastic alloy with a driven and a driving end having an integral tongue member, defining a passageway extending along a first axis;  
a fitting member defining a shape presenting a first mating interface surface; and  
a tool-bit member having a second axis and presenting a second mating interface surface adapted for receptive complementary facing with the first mating interface surface, including a recess formed in the second mating interface surface,  
whereupon relative motion activates the super-elastic alloy of the tongue, which detentively snaps into the recess to align the first and second axes with one another.
12. The instrument of Claim 11 wherein the fitting has an aperture opening onto the first mating interface surface and the tongue projects through the aperture.
13. The instrument of Claim 11 wherein the tongue extends axially from an end of the fitting member and into the tool-bit.
14. The instrument of Claim 11, the fitting member further comprising a male part extending axially therefrom that defines a jig-saw shape presenting the first mating interface surface and wherein the tool-bit defines a female jigsaw shape presenting the second mating interface surface.
15. The instrument of Claim 11, the passageway extending from an axially open center of the tubular member and opening onto the first mating interface surface, wherein the recess aligns concentrically with the passageway when the tool bit and the tubular member are slid sideways relative to one another so that the first and second mating interface surfaces are juxtaposed.

16. A flexible surgical reamer having a torque-transmitting coupling assembly and comprising:

a tubular member made of super-elastic alloy with a driven end and a driving end having an integral tongue member, defining a passageway extending along a first axis;

a fitting member defining a shape presenting a first mating interface surface including an aperture opening onto the first mating interface surface, with the tongue projecting through the aperture; and

a tool-bit member having a second axis and presenting a second mating interface surface adapted for receptive complemental facing with the first mating interface surface, including a recess formed in the second mating interface surface,

whereupon relative motion activates the super-elastic alloy of the tongue, which detentively snaps into the recess to align the first and second axes with one another.

17: The reamer of Claim 16 further comprising another torque-transmitting coupling assembly, including a drive fitting and a radially flexing collet that connects the driven end to the drive fitting.

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